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## **Vyvo Wireless Access System**

# **V284+A with rigid case (V290iA model)**

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### **Product Description**

The V290iA is an enhanced model of another Vyvo's product, the V284+A, which has FCC ID: PBJV284-PLUS-A.

The V284+A was integrated into a new rigid case, built to endure harsh environmental conditions, common in the utility market.

The RF chain of the new presented model - V290iA, is the same as the RF chain of the V284+A Vyvo's previous PBJV284-PLUS-A.

The V290iA rigid case contains the V284+A board with RF port at 776 – 777MHz, Power Supply & Control (PSC), Cisco card stack and thermal controlled components (heat / cool).

The PSC provides the power management of the V290iA units: V284+A board, Cisco 3200, heater and cooler.

The Cisco cards stack contain digital cards (listed below) and a Wi-Fi card that already has its own modular FCC ID: LDK102052.

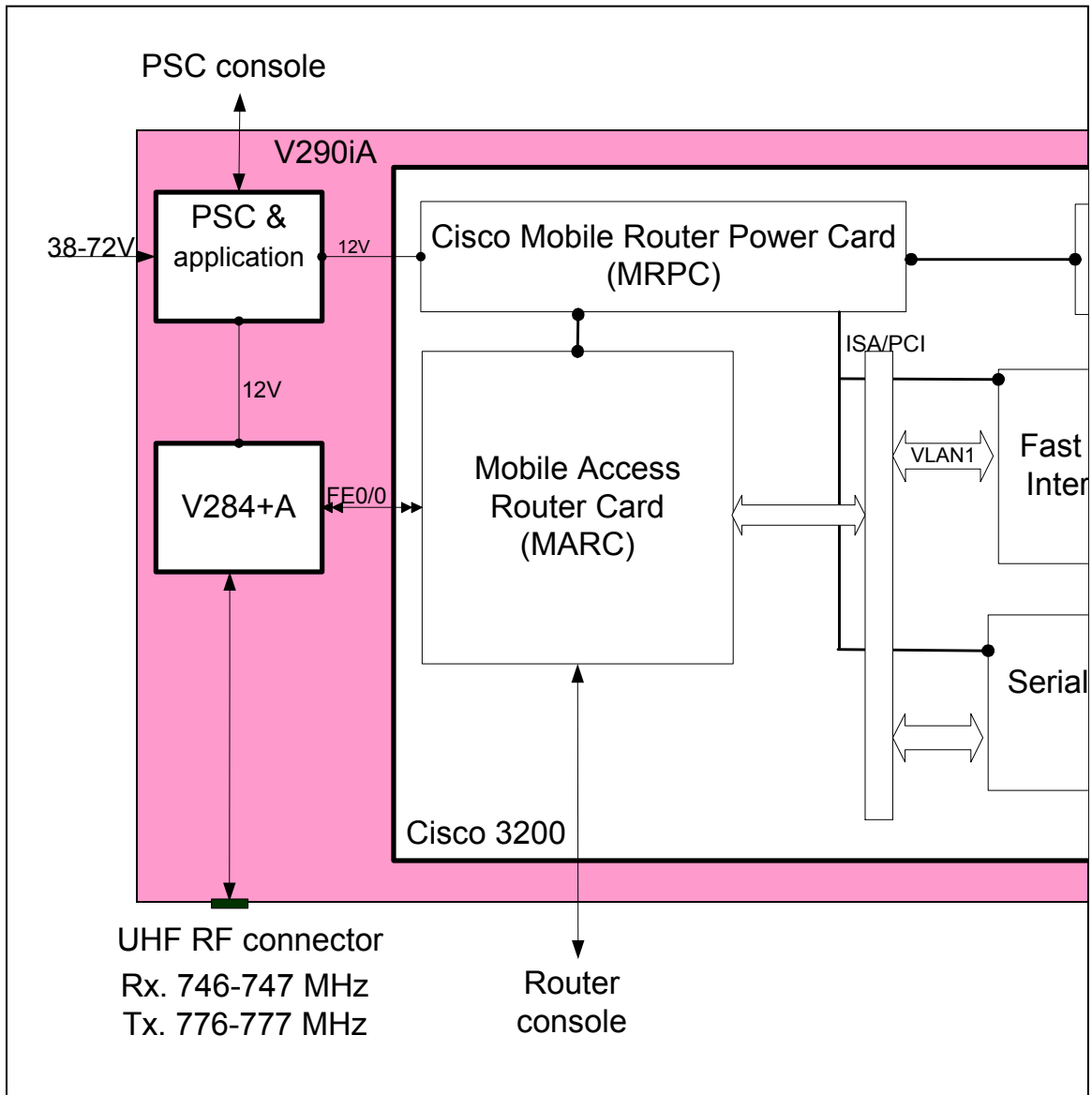
Cisco 3200 card stack has the following cards:

1. Mobile Access Router Card (MARC) - the routing engine of the Cisco 3200. It is connected to the V284+A through its Ethernet interface.
2. 4-Port Fast Ethernet Switch Mobile Interface Card (FESMIC) provides four sets of Fast Ethernet signals.
3. 4-Port Serial Mobile Interface Card (SMIC) provides four sets of serial signals.
4. Wireless Mobile Interface Card (WMIC) - a 2.4 GHz Wi-Fi interface (2.412-2.462 GHz), which can be configured as an access point (AP), a root bridge, or a non-root bridge. The WMIC is connected to a Fast Ethernet port on the FESMIC.

## 5. Mobile Router Power Card (MPRC)

The thermal controlled components contain a hot/cold thermoelectric cooler (TEC) and a power resistor that controls the rigid case internal temperature.

Figure 1 below present a functional interconnect drawing of the V290iA model



The V290iA provides the following interfaces:

<b>Power</b>	Circular plastic connector, Female
<b>Ethernet Interface:</b>	3 x rugged RJ45 jack
<b>RF Interface (UHF):</b>	N-Type Female, 50 ohm
<b>RF Interface (2.4 GHz Wi-Fi):</b>	2 x TNC-type Female, 50 ohm
<b>Serial Interface:</b>	4 x DB9 male RS-232 connectors (for SCADA RTU connection or alike)
<b>Console ports</b>	2 x DB9 Female RS-232

**Table 1: V290iA interfaces**

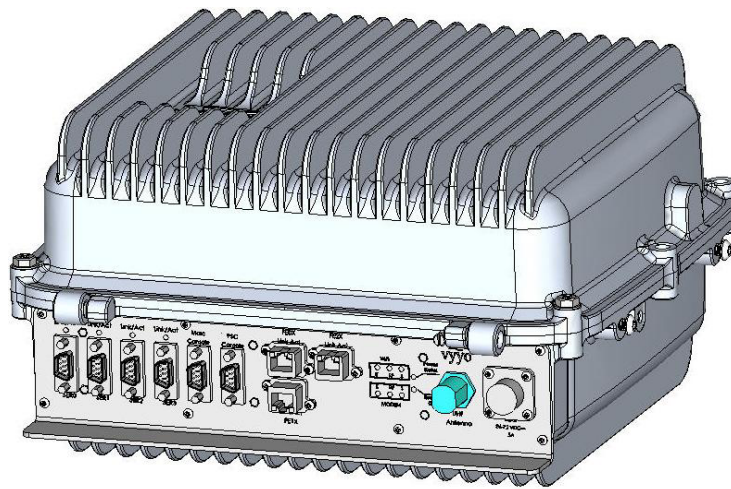
The V290iA supports the following mounting options:

1. Pole mount kit: 2" to 4" diameter
2. Wall mount bracket
3. Shelf mount

The V290iA enclosure dimensions 180 x 310 x 340 mm (7.1' x 12.2' x 13.4') and its total weight is 12 Kg (26.5 lbs). All cards mounting screws are attached to the chassis for grounding. Ground screw attached to the chassis base. The external connector interface panel is conductive and grounded.

## **Power**

The V290iA supports input rated voltage of 48VDC (38-72 VDC). The PSC includes an EMI input filter to minimize conducted and radiated emissions.



**Figure 2 - V290iA model**